


**POLYELECTROLYTE FUEL CELL****Publication number:** EP1304753**Publication date:** 2003-04-23**Inventor:** YASUMOTO EIICHI (JP); YOSHIDA AKIHIKO (JP);  
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NIIKURA JUNJI (JP); MORITA JUNJI (JP)**Applicant:** MATSUSHITA ELECTRIC IND CO LTD (JP)**Classification:****- international:** *H01M4/86; H01M4/88; H01M4/96; H01M4/86;  
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H01M4/96***- european:****Application number:** EP20010945738 20010629**Priority number(s):** WO2001JP05684 20010629; JP20000200656  
20000703; JP20000204633 20000706; JP20000204719  
20000706**Also published as:** WO0203489 (A)**Report a data error he****Abstract of EP1304753**

In a polymer electrolyte fuel cell including a hydrogen ion conductive polymer electrolyte membrane; a pair of electrodes composed of catalyst layers sandwiching the hydrogen ion conductive polymer electrolyte membrane between them and gas diffusion layers in contact with the catalyst layers; a conductive separator plate having a gas flow channel for supplying a fuel gas to one of the electrodes; and a conductive separator plate having a gas flow channel for supplying an oxidant gas to the other electrode, in order to bring a hydrogen ion conductive polymer electrolyte and a catalyst metal of the catalyst layers containing the hydrogen ion conductive polymer electrolyte and conductive carbon particles carrying the catalyst metal sufficiently and evenly into contact with each other, the polymer electrolyte is provided in pores of an agglomerate structure of the conductive carbon particles. Consequently, the reaction area inside the electrodes is increased, and higher performance is exhibited.

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